

WHAT IS CLAIMED IS:

1        1. For use in a radio access network having a first control node which controls a  
2 first set of base stations and a second control node which controls a second set of base  
3 stations, each base station serving a cell, a method comprising transmitting cell  
4 information from the second control node to the first control node only when the cell  
5 information is not already known by the first control node, the cell information  
6 including a set of cell information parameters characterizing a specified cell served by a  
7 base station controlled by the second control node.

1        2. The method of claim 1, further comprising:  
2            determining from a cell identifier for the specified cell whether the specified cell  
3 is a valid cell;  
4            sending a response message from the second control node to the first control  
5 node; and  
6            further comprising including in the response message an indication that the  
7 specified cell is not a valid cell.

1        3. The method of claim 1, further comprising:  
2            sending a request message from the first control node to the second control node,  
3 the request message including a cell identifier for the specified cell;  
4            sending a response message from the second control node to the first control  
5 node;  
6            including in the response message both (1) the cell information deemed current  
7 by the second control node for the specified cell; and (2) an index which is  
8 representative of the cell information deemed current by the second control node for the  
9 specified cell.

1        4. The method of claim 3, wherein the index is of a shorter length than the cell  
2 information.

1        5. The method of claim 3, further comprising forming the index as a counter  
2 whose value is changed when configuration data of the specified cell is changed.

1       6. The method of claim 3, wherein the request message requests that the second  
2 control node allocate resources in the specified cell for a connection controlled by the  
3 first control node.

1       7. The method of claim 6, wherein the request message is one of a radio link  
2 setup request message and a radio link addition request message.

1       8. The method of claim 3, wherein the request message requests retrieval of cell  
2 information for the specified cell from the second control node.

1       9. The method of claim 1, further comprising:  
2            sending a request message from the first control node to the second control node;  
3            and  
4            including in the request message an index which is representative of the cell  
5 information deemed current by the first control node for the specified cell.

1       10. The method of claim 9, wherein the index is of a shorter length than the cell  
2 information.

1       11. The method of claim 9, further comprising forming the index as a counter  
2 whose value is changed when configuration data of the specified cell is changed.

1       12. The method of claim 9, further comprising:  
2            (1) determining whether the index included in the request message represents  
3 cell information which is deemed current by the second control node;  
4            (2) sending a response message from the second control node to the first control  
5 node; and  
6            (3) if the determination of step (1) is negative, including in the response  
7 message the cell information deemed current by the second control node for the  
8 specified cell.

1  
2       13. The method of claim 12, further comprising including in the response  
3 message an index which is representative of the cell information deemed current by the  
4 second control node for the specified cell.

1        14. The method of claim 9, further comprising:  
2            determining from a cell identifier for the specified cell whether the specified cell  
3        is a valid cell;  
4            sending a response message from the second control node to the first control  
5        node; and  
6            further comprising including in the response message an indication that the  
7        specified cell is not a valid cell.

1        15. The method of claim 9, wherein the request message requests that the  
2        second control node allocate resources in the specified cell for a connection controlled  
3        by the first control node.

1        16. The method of claim 15, wherein the request message is one of a radio link  
2        setup request message and a radio link addition request message.

1        17. The method of claim 9, wherein the request message requests retrieval of  
2        cell information for the specified cell from the second control node.

1        18. The method of claim 1, wherein the cell information includes a set of cell  
2        information parameters which characterizes the specified cell and a set of cell  
3        information parameters which characterizes at least one neighboring cell, the  
4        neighboring cell being adjacent to the specified cell.

1        19. The method of claim 18, further comprising:  
2            sending a request message from the first control node to the second control node;  
3        and  
4            including in the request message an index which is representative of the cell  
5        information deemed current by the first control node for the specified cell and a  
6        neighbor index which is representative of the cell information deemed current by the  
7        first control node for the neighboring cell.

1        20. The method of claim 19, wherein the neighbor index is of a shorter length  
2        than the cell information for the neighboring cell.

1        21. The method of claim 19, further comprising forming the neighbor index as a  
2 counter whose value is changed when configuration data of the neighboring cell is  
3 changed.

1        22. The method of claim 19, further comprising:

2            (1) determining whether the index included in the request message represents  
3 cell information which is deemed current by the second control node;

4            (2) determining whether the neighbor index included in the request message  
5 represents cell information which is deemed current by the second control node for the  
6 neighboring cell;

7            (3) sending a response message from the second control node to the first control  
8 node;

9            (4) if the determination of step (1) is negative, including in the response  
10 message the cell information deemed current by the second control node for the  
11 specified cell.

12            (5) if the determination of step (2) is negative, including in the response  
13 message the cell information deemed current by the second control node for the  
14 neighboring cell.

1        23. The method of claim 22, further comprising including in the response  
2 message a neighboring index which is representative of the cell information deemed  
3 current by the second control node for the neighboring cell.

1        24. The method of claim 19, further comprising:

2            determining from a cell identifier for the neighboring cell whether the  
3 neighboring cell is a valid cell;

4            sending a response message from the second control node to the first control  
5 node; and

6            further comprising including in the response message an indication that the  
7 neighboring cell is not a valid cell.

1        25. The method of claim 19, wherein the request message requests that the  
2 second control node allocate resources in the specified cell for a connection controlled  
3 by the first control node.

1        26. The method of claim 25, wherein the request message is one of a radio link  
2        setup request message and a radio link addition request message.

1        27. A telecommunications network comprising:  
2            a radio access network having a first control node and a second control node,  
3            each of the first control node and the second control node controlling at least one base  
4            station;  
5            a signaling link connecting the first control node and the second control node;  
6            wherein the second control node transmits cell information from the second  
7            control node to the first control node over the signaling link only when the cell  
8            information is not already known by the first control node, the cell information  
9            including a set of cell information parameters characterizing a specified cell served by a  
10          base station controlled by the second control node.

1        28. The apparatus of claim 27, wherein the first control node sends a request  
2        message to the second control node, the request message including a cell identifier for  
3        the specified cell, and wherein the second control node sends a response message to the  
4        first control node, the response message including both (1) the cell information deemed  
5        current by the second control node for the specified cell; and (2) an index which is  
6        representative of the cell information deemed current by the second control node for the  
7        specified cell.

1        29. The apparatus of claim 28, wherein the index is of a shorter length than the  
2        cell information.

1        30. The apparatus of claim 28, wherein the index is a counter whose value is  
2        changed when configuration data of the specified cell is changed.

1        31. The apparatus of claim 28, wherein the second control node determines  
2        from a cell identifier for the specified cell whether the specified cell is a valid cell and  
3        sends a response message from the second control node to the first control node;  
4        including in the response message an indication that the specified cell is not a valid cell.

1       32. The apparatus of claim 28, wherein the request message requests that the  
2 second control node allocate resources in the specified cell for a connection controlled  
3 by the first control node.

1       33. The apparatus of claim 32, wherein the request message is one of a radio  
2 link setup request message and a radio link addition request message.

1       34. The apparatus of claim 28, wherein the request message requests retrieval of  
2 cell information for the specified cell from the second control node.

1       35. The apparatus of claim 27, wherein the first control node sends a request  
2 message to the second control node and includes in the request message an index which  
3 is representative of the cell information deemed current by the first control node for the  
4 specified cell.

1       36. The apparatus of claim 35, wherein the index is of a shorter length than the  
2 cell information.

1       37. The apparatus of claim 35, wherein the index is a counter whose value is  
2 changed when configuration data of the specified cell is changed.

1       38. The apparatus of claim 35, wherein the second control node determines  
2 whether the index included in the request message represents cell information which is  
3 deemed current by the second control node and, in the event of a negative  
4 determination, includes in a response message sent to the first control node the cell  
5 information deemed current by the second control node for the specified cell.

1       39. The apparatus of claim 38, wherein the response message includes an index  
2 which is representative of the cell information deemed current by the second control  
3 node for the specified cell.

1       40. The apparatus of claim 35, wherein the second control node determines  
2 from a cell identifier for the specified cell whether the specified cell is a valid cell, in  
3 the event of an affirmative determination, includes in a response message sent to the  
4 first control cell an indication that the specified cell is not a valid cell.

1        41. The apparatus of claim 35, wherein the request message requests that the  
2 second control node allocate resources in the specified cell for a connection controlled  
3 by the first control node.

1        42. The apparatus of claim 41, wherein the request message is one of a radio  
2 link setup request message and a radio link addition request message.

1        43. The apparatus of claim 35, wherein the request message requests retrieval of  
2 cell information for the specified cell from the second control node.

1        44. The apparatus of claim 28, wherein the cell information includes a set of cell  
2 information parameters which characterizes the specified cell and a set of cell  
3 information parameters which characterizes at least one neighboring cell, the  
4 neighboring cell being adjacent to the specified cell.

1        45. The apparatus of claim 44, wherein the first control node sends a request  
2 message to the second control node and includes in the request message an index which  
3 is representative of the cell information deemed current by the first control node for the  
4 specified cell and a neighbor index which is representative of the cell information  
5 deemed current by the first control node for the neighboring cell.

1        46. The apparatus of claim 45, wherein the neighbor index is of a shorter length  
2 than the cell information for the neighboring cell.

1        47. The apparatus of claim 45, wherein the neighbor index is a counter whose  
2 value is changed when configuration data of the neighboring cell is changed.

1        48. The apparatus of claim 45, wherein the second control node determines  
2 from a cell identifier for the neighboring cell whether the neighboring cell is a valid cell  
3 and, in the event of an affirmative determination, includes in a response message sent to  
4 the first control node an indication that the neighboring cell is not a valid cell.

1        49. The apparatus of claim 45, wherein the request message requests that the  
2 second control node allocate resources in the specified cell for a connection controlled  
3 by the first control node.

1        50. The apparatus of claim 49, wherein the request message is one of a radio  
2        link setup request message and a radio link addition request message.

51. The apparatus of claim 27, wherein the first control node and the second  
control node are both radio network control nodes.

52. The apparatus of claim 51, wherein the first control node is a Serving Radio  
Network Control (SRNC) node and the second control node is a Drift Radio Network  
Control (DRNC).